SANTA CRUZ BIOTECHNOLOGY, INC.

GTBP (Q-20): sc-1242

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The finding that mutations in DNA mismatch repair genes are associated with hereditary nonpolyposis colorectal cancer (HNPCC) has resulted in considerable interest in the understanding of the mechanism of DNA mismatch repair. Initially, inherited mutations in the MSH2 and MLH1 homologs of the bacterial DNA mismatch repair genes MutS and MutL were demonstrated at high frequency in HNPCC and were shown to be associated with microsatellite instability. A member of the mismatch repair family, GTBP (also designated MSH6), is a 160 kDa MSH2-related protein that binds to DNA containing G/T mismatches. Findings suggest that the mismatch-binding factor in human cells is composed of a heterodimer of GTBP and MSH2.

REFERENCES

1. Peltomäki, P., et al. 1993. Genetic mapping of a locus predisposing to human colorectal cancer. Science 260: 810-812.
2. Palombo, F., et al. 1994. Mismatch repair and cancer. Nature 367: 417-418.

CHROMOSOMAL LOCATION

Genetic locus: MSH6 (human) mapping to 2p16.3.

SOURCE

GTBP (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GTBP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1242 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

GTBP (Q-20) is recommended for detection of GTBP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GTBP (Q-20) is also recommended for detection of GTBP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GTBP siRNA (h): sc-35528, GTBP shRNA Plasmid (h): sc-35528-SH and GTBP shRNA (h) Lentiviral Particles: sc-35528-V.

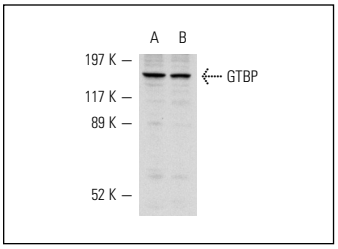
Molecular Weight of GTBP: 160 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, DU 145 nuclear extract: sc-24960 or A-431 nuclear extract: sc-2122.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GTBP (Q-20): sc-1242. Western blot analysis of GTBP expression in HeLa (**A**) and A-431 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Matton, N., et al. 2000. Identification of mismatch repair complexes in HeLa nuclear extracts and their interaction with heteroduplex DNA. J. Biol. Chem. 275: 17808-17813.
2. Gu, Y., et al. 2002. Human MutY homolog, a DNA glycosylase involved in base excision repair, physically and functionally interacts with mismatch repair proteins human MutS homolog 2/human MutS homolog 6. J. Biol. Chem. 277: 11135.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.